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Amendment to the Claims

1-22. (Cancelled)

23. (New) A spraying device for melt granulation in a fluidized bed, the spraying device comprising:

a nozzle with a central liquid supply channel for a liquid to be atomized, where the liquid is led through emulsifying means and into an internal mixing chamber for gas and liquid, before it is fed to the fluidized bed; and

an external gas cap surrounding the nozzle,

wherein the nozzle has a separate channel for the atomizing gas fitted concentrically around the central liquid supply channel for the liquid to be atomized, and wherein the internal mixing chamber surrounds an outlet zone of the liquid spray from the emulsifying means and the gas, thereby allowing efficient mixing of high speed atomization gas and liquid, and fluidization gas is channeled through the external gas cap into a spout above the spraying device.

24. (New) A spraying device according to claim 23, wherein the mixing chamber is cylindrical with an upper conical part.

25. (New) A spraying device according to claim 24, wherein the upper conical part terminates in an orifice, and the ratio between the length (L) and the diameter (D) of the mixing chamber is in the range of 0.5 to 5 and the ratio of the length (l) and the diameter (d) of the orifice is in the range of 0.1 to 2.

26. (New) A spraying device according to claim 24, wherein the upper conical part terminates in an orifice, and the ratio of the length (L) and the diameter (D) of the mixing chamber is in the range of 1 to 4 and ratio of the length (l) and the diameter (d) of the orifice is in the range 0.25 to 1.
27. (New) A spraying device according to claim 23, wherein the mixing chamber is conical.
28. (New) A spraying device according to claim 23, wherein the gas cap is conical and fitted to a perforated bottom plate, concentrically around the nozzle.
29. (New) A spraying device according to claim 28, wherein the gas cap has a height of 10 to 200 mm above the bottom plate.
30. (New) A spraying device according to claim 28, wherein the gas cap has a height of 20 to 100 mm above the bottom plate.
31. (New) A spraying device according to claim 28, wherein the gas cap has an upper aperture diameter of 20 to 150 mm and a bottom aperture diameter of 30 to 300 mm.
32. (New) A spraying device according to claim 28, wherein the gas cap has an upper aperture diameter of 35 to 100 mm and a bottom aperture diameter of 40 to 200 mm.
33. (New) A method for preparation of solid granules in a fluidized bed, the comprising:

atomizing a liquid material by supplying an atomizing gas and spraying the atomized liquid material into the fluidized bed through a vertically mounted spray nozzle; and

blowing a fluidization gas upwards through a perforated plate disposed underneath the bed, wherein the fluidized bed is maintained by the fluidization gas blown upwards through the perforated plate,

wherein a portion of the fluidization gas is channeled through a gas cap surrounding the nozzle for creation of a gas spout above the nozzle and the gas cap.

34. (New) A method for preparation of solid granules from a liquid material in a fluidized bed, the method comprising:

feeding a liquid to be atomized to a central liquid supplying channel of a nozzle, wherein the liquid is led through an emulsifying means disposed inside the central liquid supplying channel and into an internal mixing chamber for gas and the liquid, before the liquid is atomized and sprayed upwardly into the fluidized bed layer;

supplying atomizing gas to the mixing chamber through a channel concentrically disposed relative to the central liquid supplying channel and into the mixing chamber surrounding outlet openings for both the liquid and the gas, thereby allowing efficient mixing of high speed atomization gas and the liquid; and

channeling a portion of a fluidization gas through a gas cap that surrounds the nozzle, thus creating a gas spout above the gas cap and nozzle.

35. (New) A method for preparation of granules of urea, calcium ammonium nitrate, ammonium nitrate, ammonium sulphate and mixtures thereof, the method including spraying an atomized liquid into a fluidized bed layer with the spraying device according to claim 23.